

REMARKS

The amendments set out above and the following remarks are believed responsive to the points raised by the Office Action dated April 15, 2002. In view of the amendments set out above and the following remarks, reconsideration is respectfully requested.

Claims 1 and 14-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,984,325 to Rosaen (hereinafter referred to as "Rosaen") in view of U.S. Patent No. 5,543,047 to Stoyell et al. (hereinafter referred to as "Stoyell") and U.S. Patent No. 4,228,012 to Pall (hereinafter referred to as "Pall"). This rejection is respectfully traversed.

Claim 1 has been amended to refer to the joiner caps as open joiner caps, in order to expressly refer to a known attribute of joiner caps. The present specification makes clear joiner caps comprise open end caps, for example at page 43, lines 21-22, and thus the amendment does not constitute a narrowing of the claim, but merely explicitly states that which was already inherent in the claim.

Rosaen, the primary reference, is completely different from the separation element defined in claim 1. The separation element defined by claim 1 includes two or more pack sections and open joiner caps, adjacent open joiner caps being secured to coaxially connect the pack sections and open joiner caps into a hollow separation arrangement being at least about 40 inches in length and having an interior diameter of at least about 2 inches. The filter cartridges of Rosaen do not include joiner caps, i.e., joined open caps, but rather include a blind front end cap 30 connected between the filter cartridges 22, 24. Indeed, the filter assembly of Rosaen would not function if the blind front end cap 30 was replaced with an open joiner cap, since the open joiner cap would allow fluid to flow from the cartridge filter 22 into the adjacent cartridge filter 24 and Rosaen is directed to filtering using only a single cartridge (*see e.g.*, col. 1, lines 53-59).

Furthermore, the two filter cartridges of Rosaen, when fastened together do not form a hollow separation arrangement, e.g., an arrangement that allows fluid to flow through the connected pack sections, but rather, the filter assembly 25 of Rosaen includes a blind end cap 30 (i.e., the front end cap 30 of adjacent cartridge filter 24), disposed between the cartridge filters 22, 24 preventing fluid from flowing through the connected filter cartridges, and thus the assembly is not a hollow separation arrangement. For example, as explained at column 3, line 58 to column 4 line 7, fluid flows from cartridge filter 22 to the fluid outlet 16, without passing through adjacent filter cartridge 24.

Additionally, Rosaen does not disclose two or more pack sections connected to form a hollow separation arrangement being at least about 40 inches in length and having an interior diameter of at least about 2 inches. While the Office Action asserts it is considered obvious

that the element may be formed to at least 40 inches or longer and its interior diameter may be formed to be at least 2 inches, Applicants respectfully disagree. Clearly, nothing in Rosaen teaches or suggests a length of at least about 40 inches or an interior diameter of at least about 2 inches, let alone the combination of a length of at least about 40 inches and an interior diameter of at least about 2 inches. This combination of length and inner diameter limitations set forth in claim 1 is highly advantageous, as disclosed in the specification.

The Office Action cites *Gardner v. TEC Systems, Inc*, 725 F.2d 1338, 220 USPQ 777 (Fed Cir. 1984), cert. Denied, 469 U.S. 830, 225 USPQ 232 (1984), to assert that a prima facie case of obviousness exists when the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device, and the device having the claimed relative dimensions would not perform differently than the prior art device. However, the device of claim 1 does perform differently than the prior art device, for example, the combination of a length of at least 40 inches and an interior diameter of at least 2 inches effectively allows much higher throughputs than prior art devices not having the claimed combination of length and interior diameter dimensions. In *Gardner*, the dimensional limitations of the disputed claim were considered “no more than ‘window dressing’” and a “verbal difference” only. This is clearly not the case with the separation device of claim 1, as can be seen from the data in Table 1 of the specification, showing separation elements including the claimed dimensions operate effectively at significantly higher flowrates and throughputs than devices having shorter lengths and/or smaller interior diameters. Accordingly, prima facie obviousness has not been established for claim 1.

In view of the amendment and remarks recited herein, the application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue.

In re Appln. of Connors et al.
Application No. 09/091,508

Should there remain any issues outstanding, the Examiner is invited to call the undersigned at her Washington, D.C. office.

Respectfully submitted,

Shannon Schemel

Shannon Schemel, Reg. No. 47,926
LEYDIG, VOIT & MAYER, LTD.
700 Thirteenth Street, N.W., Suite 300
Washington, DC 20005-3960
(202) 737-6770 (telephone)
(202) 737-6776 (facsimile)

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PATENT
Attorney Docket No. 168567/PALL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

CONNORS et al.

Application No. 09/091,508

Art Unit: 1723

Filed: October 30, 1998

Examiner: M. Ocampo

For: SEPARATION ARRANGEMENT

AMENDMENTS TO CLAIMS MADE IN RESPONSE TO
OFFICE ACTION DATED APRIL 15, 2002

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Amendments to existing claims:

1. (Four Times Amended) A separation element for separating one or more components from a fluid flowing through the separation element, the separation element comprising:

(a) two or more hollow pleated pack sections, each pack section having a plurality of pleats, wherein the plurality of pleats includes roots, crowns, legs extending between the roots and the crowns, an inner periphery at the roots defining an upstream side, and an outer periphery at the crowns defining a downstream side and wherein each pleat has a height h greater than $(D-d)/2$ where D is the outer diameter at the outer periphery of the plurality of pleats and d is the inner diameter at the inner periphery of the plurality of pleats, a retainer disposed around the pleats, first and second ends, and a porous medium comprising a polymeric material or a glass fiber material;

(b) open joiner caps attached to at least one end of each of the two or more pack sections, adjacent open joiner caps being secured to coaxially connect the pack sections and open joiner caps into a hollow separation arrangement being at least about 40 inches in length and having an interior diameter of at least of about 2 inches; and

(c) first and second end caps attached to the hollow separation arrangement, wherein one of the first and second end caps comprises a seal having an outside diameter greater than the largest outside diameter of the hollow separation arrangement, the open joiner caps and the end caps including a polymeric, thermoplastic or elastomeric material.